



# ZEV OUTREACH AND PUBLIC EDUCATION



A Report on Outreach and Public Education for  
Zero Emission Vehicles  
Prepared for the Air Resources Board  
January 2001

## EXECUTIVE SUMMARY

While affirming the ZEV requirement at its September 8, 2000 meeting, the Board expressed the need to greatly enhance public awareness and education of the attributes and benefits of ZEV technologies. For this reason, we are proposing to develop a comprehensive public education and marketing plan for zero emission vehicles.

To date, many stakeholder groups including state agencies such as the Air Resources Board and Department of General Services have been proactive in conducting market research and public outreach and education programs for ZEVs. Although these efforts have been beneficial, a comprehensive outreach and education plan, incorporating the latest requirements, must be developed to take these efforts to the next level.

The ARB recognizes that past efforts have been made by stakeholder groups including the California Electric Transportation Coalition, the ZEV Alliance, the Production EV Drivers, the Union of Concerned Scientists and auto manufacturers to develop and implement ZEV awareness campaigns. All of these efforts have been beneficial to the ZEV program and should be used as the foundation as the ARB and stakeholders move forward to develop and implement a plan.

To do this, staff proposes to hold a workshop in late February to receive input from experts and stakeholders on developing the public education and outreach plan. Staff also proposes that a working group or steering committee be established to address this issue. Continued input from such a group would be beneficial for the long-term success of implementing the plan.

A variety of public education and outreach ideas are also described in the report including:

- Enhancing the [www.ZEVinfo.com](http://www.ZEVinfo.com) web site using multi-media technologies to replicate the experience someone has when they walk up to an EV driver and ask them questions.
- Creating a CD-Rom using the materials on the web site to be given out at schools and conferences.
- Working with the ARB's new Community Health Program to reach a broad segment of communities in California.
- Using the draft "Electric Vehicle Consumer Awareness Campaign" sponsored by the Natural Resource Defense Fund and the California Electric Transportation Coalition as the foundation for developing and implementing an outreach plan.

If these elements along with input from experts and stakeholders are implemented, this comprehensive outreach and public education plan will play an important role in achieving a sustainable ZEV market in California.

## **A. INTRODUCTION**

This report describes how a comprehensive marketing plan for ZEVs will be developed. It begins with past and present outreach and market research activities followed by a proposal to move forward to build on what has already been done to create a comprehensive public outreach and education plan for ZEVs. Finally, it describes an approach for exchanging knowledge, information and expertise among all the stakeholders in this area. Working cooperatively with auto manufacturers, utilities, government, academia and environmental groups is essential if any public outreach campaign for ZEVs is going to be successful.

### **1. Background**

Air quality in California has improved dramatically over the past 25 years, largely due to continued progress in controlling pollution from motor vehicles. Faced with ever more stringent regulations, vehicle manufacturers have made remarkable advances in vehicle technology. About 2,300 zero-emission vehicles are now in everyday service on California roads, and the latest conventional internal combustion engine vehicles achieve emission levels that seemed impossible just a few short years ago.

Despite this progress, the number of vehicles in California continues to grow and Californians are driving an ever-increasing numbers of miles. The result is that mobile sources are still responsible for well over half the ozone-forming emissions in California. The Zero Emission Vehicle program is a critical part of the Air Resources Board's (ARB) plan to meet State and federal-health based air quality standards, which continue to be exceeded in all of California's metropolitan areas.

Starting in 2003, automobile manufacturers are required to offer zero emission vehicles to meet the ZEV mandate. Auto manufacturers are encouraged to produce ZEVs prior to 2003 through the use of multiple credits for early introduction. Currently, electric vehicles (EVs) are the only zero emission technology that are commercially available. However, the proposed changes to the ZEV mandate will bring additional emphasis to other electro-drive technologies. Therefore it is important to include the entire array of electro-drive systems in any public outreach and education plan that is developed.

There are many benefits to promoting zero emission and other advanced technology vehicles. ZEVs have zero or almost zero tail pipe emissions which cause smog formation, they also reduce toxic emissions, greenhouse gas emissions, promote energy diversity and reduce impacts that used oil and leaking fuel have on water quality.

## **2. The Need for Public Outreach and Education**

In order to develop a sustainable market for ZEVs, we need to increase sales of EVs by advancing awareness about the new motor vehicle technologies available and the benefits they offer.

Electric vehicles may not be a new technology but most people are unaware of the capabilities of the new production EVs on the road today. Most consumers have many misconceptions about EVs. These misconceptions are due to exposure to old outdated technologies or misleading stories in the media. The old vision of electric vehicles must be dispelled. This can only be done through and extensive outreach and public education campaign that catches the eye of the consumer and the public at large.

A public information and education campaign must provide people with accurate information about the many attributes of EVs. It is also necessary, as with any new technology, to provide people with the opportunity to try out the technology first hand in order to get people past their fear of the unknown.

Currently there is a small segment of the population in California known as "early adopters." These people have embraced this new technology and if they had a choice would never go back to the internal combustion engine. However, in order to make ZEVs successful, the general public must be aware of the new technologies and the market must be expanded to mainstream consumers. Although there may not be enough EVs to meet a significant demand, the public should be aware of these new technologies in order to develop a growing market for cleaner, more efficient, advanced technology vehicles.

## **3. Unique Attributes of the EV Market**

Before listing the marketing needs of EVs it is important to understand some unique attributes of EVs that need to be taken into account before addressing their marketing needs.

### Real vs. Perceived Range Needs.

Many drivers remarked that when they first considered an EV, they had an estimate in mind regarding the portion of their driving that could be accommodated within the available range. After living with the vehicle, however, they learned that their actual driving patterns were less demanding than they had imagined, and therefore they were able to use the EV far more than they had anticipated. Drivers noted that this "mismatch" between perceived and actual range need is an artificial barrier to more widespread demand for EVs. Public information and experience with the vehicles would help in getting customers beyond this perceived barrier.

### Consumer Decision Making Regarding Lifecycle Cost.

EVs will have a higher up-front cost, offset by savings over time in fuel cost and maintenance. Consumers generally have shown, however, that they value up front savings more than savings achieved over time, even if from an economic standpoint the alternatives are of equal cost. For example, consumers do not always favor energy-saving improvements that clearly will pay for themselves over time. This behavior, although “irrational” in an economic sense, is real and must be addressed in order to achieve the full EV market potential.

### Driving the Vehicle Increases Its Appeal.

Many members of the general public have preconceived notions regarding EVs--they are considered “golf carts” with limited driving appeal. At the March workshop drivers testified that once they had an opportunity to drive an EV, they were “sold”. The customer satisfaction attributes noted above (smoothness, quiet, performance, fun to drive) can only be experienced in person. Staff has noted a similar phenomenon in the operation of the EV loan program. Once fleet users have had an opportunity to drive the vehicle their acceptance of its possible application to their fleet is enhanced.

### Public Perception of Hybrid Electric Vehicles.

Many members of the public also have inaccurate perceptions of the relative environmental attributes of EVs and hybrid electric vehicles. Staff has noted that in most cases the public assumes that hybrid electric vehicles are as clean as EVs. They thus conclude that hybrids have more appeal because they are just as clean but offer unlimited range and do not need to be recharged. In fact, although the efficiency of hybrid electric vehicles offers CO<sub>2</sub> advantages, from a smog standpoint today’s hybrids are not as clean as the most advanced conventional vehicles, let alone an EV. For example, the Honda Insight is certified to the ULEV level, while Honda sells an Accord that is certified to the SULEV level. Providing consumers with accurate, easily understood comparisons of environmental impact of different vehicle types would assist in overcoming this misperception.

### Risk of New Technology.

EVs feature cutting-edge technology. For some customers, this is a positive benefit. The manufacturer marketing strategies used in early demonstration programs and for the MOA vehicles focused on “early adopters” and “techno champs” for that reason. For other customers, however, the introduction of new technology is cause for hesitation. Such customers, who ultimately may be well suited to using EVs, will need additional information and consultation. They also will be very sensitive to any perception that the EV market has no future.

#### **4. Elements Needed for a Successful EV Market**

Below are some elements that the ARB staff feels are necessary for a successful EV market.

##### Continuity.

A great deal of effort has been expended to bring us to where we are today from the standpoint of infrastructure development, dealership training, public outreach, and other factors. At the moment, however, there is a large gap between the completion of the MOA placements and the beginning of the 2003 requirement. The proposed changes to the ZEV mandate are intended to alleviate this problem, however product will still be available in limited quantities. It will be a challenge when developing a public outreach and education campaign to balance the outreach with limited numbers of vehicles.

##### Competitive Pricing.

In order for the market to succeed it will be necessary for EVs to be available to customers at prices that are competitive on a lifecycle cost basis to comparable conventional vehicles. Assuming that at least in the short term EV costs will exceed costs for conventional vehicles, it will be necessary to consider some combination of governmental incentives and manufacturer subsidies to close the gap. A discussion of incentive programs is contained in ZEV Incentives Report prepared for the Air Resources Board, January 2001.

#### **B. CURRENT MARKET RESEARCH ACTIVITIES**

Market research is the basis for any public outreach and education program. It helps define target markets best suited for buying or leasing an EV and the specific needs and values most important to them. It is also necessary to determine key messages that will appeal to the target markets. Additionally, it is used to identify the best and most cost-effective means for reaching the target markets, collect feedback on the effectiveness of communications tactics and identify what the competition is doing<sup>1</sup>.

The EV driver experience provides important information to manufacturers, regulators and future customers on the utility and viability of EVs in the "real world". Lessons learned with the EVs placed to satisfy MOA obligations can be used to better define the future EV marketplace by educating potential customers, identifying necessary technology improvements, and identifying desirable EV platforms. Various organizations, including the manufacturers, have surveyed the selected individuals or agencies that have received MOA EVs. Various organizations and the automakers have conducted market research over the past several years focusing on both retail and fleet customers. Brief

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<sup>1</sup> "Proposal: Electric Vehicle Consumer Awareness Campaign" December 22, 1998. Prepared for the Energy Foundation. Prepared by ARCADIS, GERAGHTY & MILLER. Submitted by The Core Group.

descriptions of these studies are listed below. Staff plans to work with stakeholders to conduct a more thorough analysis of these market research studies to determine what information still needs to be collected.

## **1. Retail Customers**

Because retail customers were their primary market targets, there is extensive retail customer experience with the GM EV1 and the Honda EV Plus. The GM EV 1 was available for retail leases as early as December 1996. The Honda EV Plus was available in 1998. The Ford Ranger has also been available to retail customers. Auto manufacturers and stakeholder groups used the experiences of the retail customers to conduct valuable market research studies while others continued to focus on other aspects of market research for ZEVs. Surveys relevant to retail customers include the following:

### Mid-2001 California Energy Commission Market Research

The California Energy Commission is in the process of expanding the Cal Cars model for their Efficient Vehicle Program. The CEC will conduct a consumer motivation study and then use focus groups to determine the messages and means for delivering them. This information will be fed into the Cal Cars model to better understand the future in vehicle market trends. The results of this study will be available in mid-2001.

### Mid-2001 Institute for Transportation Studies (ITS) - Davis Social Marketing Research

While social marketing is familiar in the area of public health, it is less well known in the transportation and energy areas. To introduce social marketing, ITS-Davis is going to host a workshop in March 2001 and then, based on that workshop, begin a research program to support the social marketing of clean and efficient transportation. The workshop will feature social marketing experts who have implemented successful campaigns in other areas of interest. They will provide a vision of how social marketing can be used to transform the market. Participants will then outline a plan to initiate and develop an integrated social marketing agenda for ZEV technologies and efficiency.

### 2000 Electric Power Research Institute (EPRI) Hybrid Study

EPRI has formed the Hybrid Electric Vehicle (HEV) Working Group (WG) to undertake an unbiased, scientifically based comparison of various hybrid vehicle options. This study was designed to scientifically compare, via computer modeling and other data collection and analysis, several potentially credible HEV design options.

EPRI put together a Customer Preference (CP) Team that set out to define and perform research to ascertain future customer purchase preferences of different

HEV technologies. The CP Team proposed a two-pronged strategy to achieve its objectives. The first part of the strategy, was a focus group based qualitative assessment of customer attitudes about the vehicles they own/use today. Also, what if anything they knew about HEVs. Finally, what they thought about HEVs after obtaining a better understanding of the various options and the attributes that HEVs could offer. The results of this survey will be available in February 2001.

#### September 2000 Green Car Institute

In September 2000, the Green Car Institute and the University of California at Davis (UCD), Institute for Transportation Systems (ITS) conducted a market study that seeks to review the past and current state of electric vehicle markets as well as estimate what its future potential might be. They conducted original market research in both the consumer and fleet markets, reviewed other studies in both areas, analyzed past and current marketing programs and proposed methodology that might help the EV market attain its full potential.

#### June 2000 Statewide Electric Vehicles Users Survey

A comprehensive statewide survey of EV users sponsored jointly by the California Electric Transportation Coalition, the California Energy Commission and the Mobile Source Air Pollution Reduction Committee (MSRC) was sent out in March 2000. The final assessment is expected later this year.

This study surveyed the first EV drivers and the vehicle attributes they most appreciate. Information from this survey was to be used to assist policy makers and the automotive industry with this future market. In particular, the results of this study were planned to contribute to the development of messages for the public concerning electric transportation.

#### April 2000 EV Drivers Survey

In preparation for the ARB's 2000 ZEV Biennial Review, EV owners surveyed themselves to assess their EV experiences. Results of the survey were presented at the September 2000 Board Hearing and focused on vehicle use and customer needs.

#### March 2000 Pacific Gas and Electric Company's Electric Vehicle Research

In March 2000, Pacific Gas and Electric Company conducted a customer survey to determine the extent of target-market awareness of available light-duty, highway-legal EV products.

### February 2000 Air Resources Board EV Customer Survey

Prior to the 2000 Biennial Review, ARB staff recognized that there was minimal information from independent parties on the retail customer's EV driving experience. Therefore in February 2000, staff conducted an informal survey of EV drivers via two Internet e-mail groups for EV1 and Honda EV Plus drivers to provide information on their EV experience for the 2000 biennial review.

### August 1998 Electric Vehicle Owner Survey

In mid-1998, the Mobile Source Air Pollution Reduction Review Committee (MSRC), in the South Coast Air Basin, distributed a survey to 284 EV Owners/Lessors who took advantage of the MSRC's buy-down incentive.

### May 1995 Hybrid Household Study

In May 1995, UCD, ITS conducted a study entitled "Demand for Electric Vehicles in Hybrid Households." This study looked at the EV purchase decision in terms of a household's entire stock of vehicles, car purchase behavior and travel behavior.

## **2. Fleet Customers**

Fleet customers are those who drive commercial rental EVs or a workplace fleet EV. Fleet customers typically have access to several EV platforms, including two or four seat passenger cars, trucks, utility vehicles and vans. Surveys relevant to fleet customers include the following:

### January 2001 Office of Fleet Administration Daily Rental Electric Vehicle Survey

The Department of General Services, Office of Fleet Administration operates several State garages that provide daily and long-term vehicle rentals to state agencies. Since July 1997, the State garage in Sacramento has offered free daily rental of the Honda EV Plus and the GM EV1. As of January 2001, more than 665 round trips, averaging 25 miles, have been made with a fleet of up to five EVs. The EV users were given the opportunity to complete a short survey on their EV driving experience.

### June 2000 EV Rental Drivers

ARB staff has worked with EV Rentals, in conjunction with Budget Rent-a-Car, to develop a survey to offer to short-term commercial EV renters at several California airports. The results of these surveys have been reviewed by the ARB and describe customer's level of satisfaction with the EV and renting process. These surveys benefit EV Rentals by providing them with suggestions for improving the process and the customers overall experience when renting an EV.

## August 1999 Air Resources Board Internal User Survey

The ARB Test Fleet, makes vehicles available to ARB employees for a period of two days up to a week. From July 1997 to August 1999, 245 employees made more than 2,800 trips with the test fleet. Two popular test fleet vehicles, a Honda EV Plus and a GM EV1, have been driven more than 25,000 miles and 20,000 miles, respectively. The employees were asked to complete a survey regarding their experience with each EV model.

## 1999 Southern California Edison's Municipal Fleet Survey

In 1999, Southern California Edison surveyed a total of 63 municipal agencies, colleges and transit agencies regarding their experience with their EV fleets. These fleets had a total of 178 EVs including the Chevrolet S10, Ford Ranger, GM EV1, Honda EV Plus, and Toyota RAV4. These agencies also had 67 vehicles in the acquisition process. These vehicles are typically used for administrative, enforcement and inspection purposes or as pool/loaner vehicles.

## Summary

These studies are very useful tools for determining the EV market. They show that both retail and fleet customers are very satisfied with their EVs and that most think the vehicles far exceed their expectations. They also conclude that both retail and fleet customers would like to see more vehicle platforms available. These studies also allow us to characterize the EV driver and have provided insight on their motivation for leasing an EV.

All of this information is important for expanding the EV market. However, as mentioned above, thorough analysis of these surveys is necessary to determine what additional studies need to be done in order to proceed with an effective outreach and public education campaign for ZEVs.

## **C. CURRENT OUTREACH AND PUBLIC EDUCATION ACTIVITIES**

The ARB has long recognized that an effective public outreach and education campaign for EVs is necessary to help remove many of the barriers associated with ZEVs. In fact, this was one of the ARB's commitments in the MOA. Other ZEV stakeholders have also recognized the importance of outreach for ZEVs and have taken significant steps to get the word out about EVs. Below are brief descriptions of what different stakeholders have done to increase the public's awareness of EVs.

### **1. State Agencies**

To date, the ARB and Department of General Services have been very proactive in conducting public outreach to schools, community events, and community groups. Using vehicles from the ARB test fleet, staff have participated in events

at schools, youth groups, fairs, Earth Day celebrations, Science Day at the State Capitol, Clean Air Day, Clean Cities conferences, Electric Vehicle Symposiums and the Los Angeles International Auto Show, to name a few. These events provide participants with an opportunity to gain experience with the new vehicle technology and have questions answered about EV capabilities and environmental benefits.

### ev Loan Program

The Short Term ev Loan program has been a beneficial outreach tool for EVs. This program allows public agencies to try an EV for one to two months to see if these vehicles meet the agency's needs. The goal of this program is to demonstrate the technology and encourage leasing of EVs. To date, over 150 agencies have participated in this program with a 30 percent lease rate. This lease rate would be higher if more EVs were available. The Long Term ev Loan program provides EVs to public agencies in high profile areas for up to 6 months such as Yosemite National Park. This program is transitioning into the EVs for Education program described below.

### EVs for Education

EVs for Education provides EVs to local air districts, schools and teachers for use in environmental and educational programs. To date, five vehicles have been loaned to air districts for a six-month period. The air districts have developed interactive games and educational materials that will be shared with the ARB. The ARB is planning to develop an interactive website and to work with local schools and teachers to incorporate EVs into auto shop classes and environmental education.

### [www.ZEVinfo.com](http://www.ZEVinfo.com)

A new web site was created in August 2000 as a comprehensive and centralized place for ZEV information. [www.ZEVinfo.com](http://www.ZEVinfo.com) is a "one-stop" source for all ZEV related information. It currently provides information on vehicles, incentives and government programs for private individuals and fleets.

### ZEVent 2000

The web site, [www.ZEVinfo.com](http://www.ZEVinfo.com), was established to coincide with the kick-off of the first annual ZEVent on August 17, 2000. The ZEVent gave the ARB the opportunity to showcase the latest ZEV technologies and to acknowledge the participants of ev Sacramento, a program to assist State and local public agencies in the Sacramento region to lease EVs at competitive prices. Many marketing items were developed for the ZEVent including lapel pins, tote bags, bumper stickers and window static stickers.

## ev Sacramento

ev Sacramento as mentioned above, is a program operated by the ARB and the Department of General Services (DGS) to assist State and local public agencies in the Sacramento region to lease EVs at competitive prices. This program was initiated in 1999 and has placed nearly 100 EVs in the Sacramento Region, the largest deployment ever undertaken in a California city. This program has provided fleets with thousands of miles of lower operating, fueling and maintenance costs, high reliability, employee satisfaction, zero pollution and a positive environmental image. It has also led to a 25% increase in electric vehicle charging capacity with 70 chargers being installed in over 30 new locations throughout the Sacramento area. Finally it has dramatically increased public awareness about the operation and benefits of zero emission vehicle technology and has advanced Sacramento as an electric vehicle center.

## Summary

These efforts have focused on exposing the technology to all sectors of California's communities. Ride and drives, school presentations and ev Loans provide valuable experience and exposure to the vehicles. It is our goal to greatly expand our outreach efforts through a partnership with all the stakeholders.

## **2. Electric Vehicle Consumer Awareness Campaign<sup>2</sup>**

A very promising effort took place a few years ago that may be a good foundation for a successful EV consumer awareness campaign. Approximately three years ago several ZEV advocates including the Natural Resource Defense Fund and the California Electric Transportation Coalition partnered with a few auto manufacturers to develop a proposal for an electric vehicle consumer awareness campaign. They drafted a proposal to solicit the funding necessary for the project. They also developed a non-profit organization as a means to collect funds and implement the campaign. The non-profit group called the Clean Car Education Project is still in existence and can be used as the foundation to begin this work again. The Draft Proposal clearly describes the elements and funding necessary for a successful EV consumer awareness campaign.

The primary purpose of the program detailed in the proposal was to launch a pilot EV Consumer Awareness Campaign in California that would provide accurate, credible information about EVs to targeted audiences. These audiences represent an entry point into the mainstream consumer market, with the goal of increasing EV interest and sales during a critical transition period. By providing non-partisan information to consumers, the Campaign would allow them to weigh the relative attributes of different vehicles. With accurate information and real

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<sup>2</sup> "Proposal: Electric Vehicle Consumer Awareness Campaign" December 22, 1998. Prepared for the Energy Foundation. Prepared by ARCADIS, GERAGHTY & MILLER. Submitted by The Core Group.

experience with EVs consumers can make informed decisions about the vehicle they wish to buy.

The program was designed to maximize cost effectiveness by leveraging resources within sponsoring organizations. Should the pilot program succeed in California, the lessons learned could be used to launch similar campaigns in other areas where EVs and other electric-drive train vehicles are being introduced.

The scope of work described in the EV Awareness Campaign includes the following tasks:

- Conduct market research
- Identify creative resources
- Identify target audiences
- Identify target messages
- Determine methods for message delivery
- Develop informational and educational materials
- Implement creative plan
- Test initial reactions
- Modify campaign based on results
- Measure success of the campaign.

The proposal also includes a detailed budget for achieving all of the tasks listed above. Full implementation of this proposal would cost \$7 million. This amount of money would pay for a large-scale outreach campaign that includes hiring a public relations firm and extensive paid media. Although a scaled back version of this proposal is possible and would be effective, it is clear that to take awareness of ZEVs to the next level it will take financial commitments from the stakeholders. In addition, large initial commitment may attract financial support from additional stakeholders.

### **3. Sacramento Municipal Utility District (SMUD)**

From early-1999 to mid-2000, SMUD provided EV loans to commercial and residential consumers. This program provided ZEVs to a segment of the community that the ARB could not reach with its ev Loan Program. Currently, SMUD provides short- and long-term loans to high profile individuals in California. SMUD has also produced excellent outreach materials providing information on charging locations and other technical information about the vehicles.

### **4. Green Vehicle Marketing Alliance**

The U.S. Department of Energy has initiated the formation of a new group to address and promote green vehicle marketing. This group made up of representatives of the auto industry, federal, state and local government

agencies, environmental and consumer organizations and academics had their second stakeholder meeting in mid-December 2000. These stakeholders have come together to form an improved mutual understanding of the challenges of and opportunities for marketing environmentally friendly vehicles. The group is currently defining its organizational structure, mission, membership and goals.

## **5. Alliance for Clean Air and Transportation**

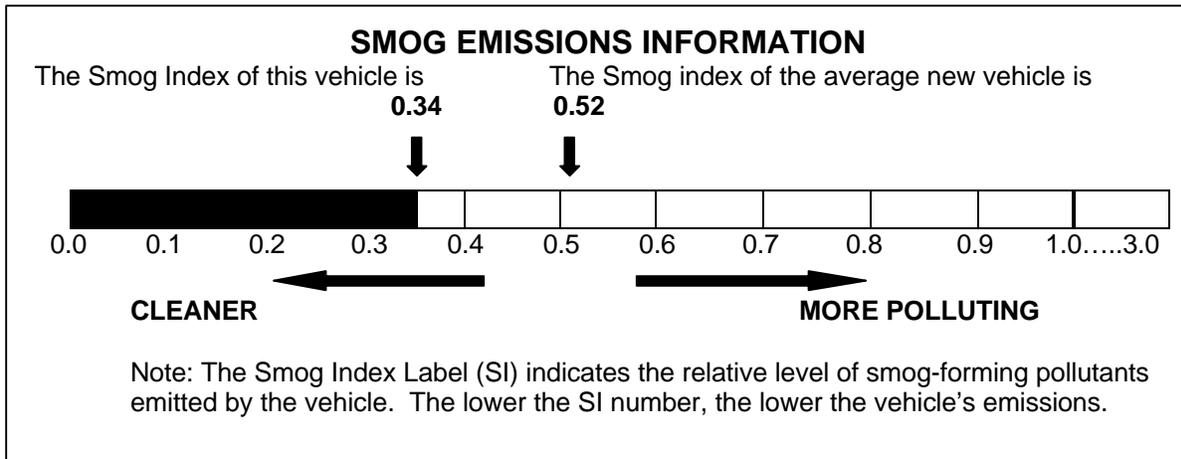
The Alliance for Clean Air and Transportation (ACAT) is a national partnership committed to air quality and transportation solutions. This alliance was established to support both state and local governments' efforts to meet their traffic congestion and air quality goals. The U.S. Department of Transportation, and the U.S. Environmental Protection Agency developed "It All Adds Up to Cleaner Air" as a Transportation and Air Quality Public Education and Information Initiative. This national effort was designed to increase awareness of the effect of individual travel decisions and transportation choices on air quality and traffic congestion.

To date, ACAT has concentrated on three areas: 1) maintaining your vehicle, 2) considering alternatives to driving alone and 3) chaining trips. ACAT is planning to expand these messages to include commuter choice and marketing green/clean vehicles. The Green Vehicle Market Alliance will be working to coordinate efforts whenever possible.

## **6. U.S. EPA Vehicle Labeling Program**

The U.S. EPA Office of Air Quality and Transportation is developing a voluntary labeling program for automobiles modeled after the "Energy Star" program. This program is intended to make consumers aware of how their vehicle choices impact air quality and global warming and energy consumption. Currently, the U.S. EPA is developing a web site to allow auto makers to voluntarily advertise the green attributes of their vehicles. Following development of the web site, the U.S. EPA will embark on the marketing phase of the program. They plan to conduct market research and work with stakeholders to develop a label and hope to have labels on some 2002 model year vehicles.

In California, since 1998 cars have been labeled with a Smog Index Label affixed to the window of new passenger cars and light-duty trucks. These labels allow consumers to more easily identify low-emitting vehicles. An example is shown below:



#### **D. MOVING FORWARD TOWARD A SUCCESSFUL OUTREACH PROGRAM**

Although all of the market research, outreach and public education efforts mentioned above have been beneficial, these efforts must be taken to the next level in order to develop a successful and sustainable EV market. To do so, it is essential that all the stakeholders work together to develop and implement a comprehensive outreach and education plan. This includes government, auto makers, utilities, EV drivers and environmental groups. All of these stakeholder groups have information, resources, expertise and experience that are essential for a successful program.

To begin this process, staff proposes to hold a workshop in early 2001 to receive input from experts and stakeholders on developing the outreach and public education plan. Staff also proposes that a working group or steering committee be established to address this issue. Continued input from such a group would be beneficial for the long-term success of implementing the plan.

The ZEV Alliance submitted "Principles for Public Education On Zero Emission Vehicles" to the ARB. It is our goal to incorporate these principles into any outreach and public education campaign developed by the stakeholders. Below is a brief description of these principles. See Attachment 1 for a more detailed description of the following principles.

Any public education campaign conducted by the ARB should:

- Inform people of the environmental and public health benefits of ZEVs.
- Include environmental and public health representation as key components of an oversight or steering committee to assist in developing and implementing the campaign.

- Highlight the real-world experiences of EV drivers and include driver representation on an oversight or steering committee to assist in developing and implementing the campaign.
- Include a component for increasing opportunity for people to be exposed to the technology, including opportunities for test-drives.
- Employ all available marketing and information resources and technologies to ensure that messages are communicated aggressively and effectively.
- Include working with the automobile manufacturers to ensure that accurate and effective promotional materials about ZEVs are available to interested customers.
- Seek to engage in partnerships to further expand the effort.
- Aggressively promote ZEV incentives.

## **1. Future Market Research**

Although there have been several market research studies conducted to date, it is important to determine what information will be useful as we move forward in developing and implementing a public awareness campaign for ZEVs. An analysis of the current studies and their results will help determine what additional studies would be useful. A few initial ideas for future market research include:

- Survey Toyota Prius drivers for information on plug-in vs. non-plug-in hybrids.
- Survey dealerships to find out what has worked and what has not.
- Survey second-generation customers, those that waited to lease or purchase an EV. Look at what motivated them to lease an EV and how long it took them to try the new technology.
- Survey customers before delivery and after.

## **2. Outreach Ideas**

A draft outreach plan that includes the goals, audience, possible messages, activities and events, products, and partners can be found in Attachment 2. Below are some more detailed descriptions of some ways the ARB, in partnership with stakeholders, can get the word out about electric vehicles and other advanced vehicle technologies.

### Enhanced Web Page

The World Wide Web continues to grow as an effective tool for disseminating information to a large number of the people. Because of this, the ARB and other stakeholders have expressed the need to create an enhanced web page for EVs. The existing web page, [www.ZEVinfo.com](http://www.ZEVinfo.com), could be upgraded to be a "one-stop" shop for EV information including an exciting multi-media approach to providing clear, decisive information on ZEV incentives, infrastructure incentives, and ride and drive opportunities throughout the state.

www.ZEVinfo.com could replicate the experience someone has when walking up to an EV driver and asking them questions about their vehicle. This enhanced web site would do this by including video clips of EV drivers answering questions and explaining the benefits of EVs. The web site would be set up to answer the most basic questions about EVs, and provide detailed information on safety, advanced batteries, cost and energy use. It would allow the consumer to get a sense of the enthusiasm and the overwhelming benefits of EVs that are often not portrayed in the media or on fact sheets. In order to attract visitors to this site, ARB would have it placed on EV and automobile related web sites, government web sites and other stakeholders web sites.

### Multi Media Presentation on CD-ROM

This enhanced web page would be further utilized by placing the information on a CD-ROM for distribution at conferences, to dealers, interested consumers, media, etc. This would be an excellent, cost-effective way to disseminate information and make the information exciting and interesting.

### Ride and Drives

It has been shown that getting people into an EV is the most effective way to convince them of the capabilities and benefits of these vehicles. Therefore, opportunities for the public to test drive EVs must be expanded beyond what the dealerships offer. Overnight test drives are especially useful when trying to overcome the perceived barriers of driving an EV. In Mendrisio, Switzerland, overnight test drives were found to be a critical tool for selling EVs<sup>3</sup>. One goal of an outreach and education program would be to expand the current loan programs to provide more overnight and extended loans to private individuals as well as public agencies. This could be accomplished through a rental agency, ARB ride and drive promotional activities and with increased utility participation. In addition, the ARB could expand the demonstration fleet by placing more vehicles in the ev Loan Program. Also, www.ZEVinfo.com could also be effective tool to provide information on test drive opportunities throughout California using a zip code search.

### Expand EVs for Education

EVs for education provides and excellent opportunity to inform kids about new advanced technologies and the environmental impacts of transportation. In addition to exposing children to these technologies, it increases the amount of information being disseminated to parents and school administration. Additional educational tools and activities could be incorporated into this program to more actively involve the parents and make it more interactive and effective. Increasing the number of school visits done by ARB staff is another way to expand this program.

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<sup>3</sup> "Large-scale fleet test with lightweight electric vehicle (LEVs) in Mendrisio" 3<sup>rd</sup> interim report. August 2000. Issued by: AssoVEL, Mendrisio on behalf of the Federal Office of Energy

### Model EV Ordinance

The ARB is currently developing a model EV ordinance that can be easily adopted by city and counties. This model ordinance encourages cities and counties to increase the number of ZEVs in their fleets. It promotes increased installation of EV infrastructure and encourages cities and counties to include EV parking incentives in city and county lots. Support and outreach efforts for this ordinance will help the ZEV program expand in California communities.

### Outreach with Community Health Program

The ARB has recently established a new Community Health Program to ensure that all California communities have clean, healthful air. Through this program, the ARB is addressing not only the regional smog that hangs over our cities but also the nearby toxic pollution that is generated within our communities. The ARB could incorporate ZEV outreach into the ARB's Community Health Program. This would allow more people in local communities and their community leaders to be exposed to ZEV technologies.

### Proactive Response to Misinformation

Due to opposition to the ZEV mandate and people's misperceptions about the technology, a lot of misinformation has been circulated in newspapers, magazines and other mass media publications. This only sustains people's negative perceptions of EVs. One potential outreach activity would be development of a proactive approach to responding to these types of articles and information. To date, the ARB has not taken a very proactive role in correcting misinformation. However many stakeholders have expressed the need to develop a strategy for responding to negative press, to counter studies and other sources that present inaccurate, misleading, and negative information about ZEVs.

### Production EV Drivers

The Production EV Drivers (PEVD) have also expressed many outreach ideas that could be explored further. A detailed description of their ideas can be found [DrivingTheFuture.com](http://DrivingTheFuture.com). Some of these ideas include:

- Separate the battery from the vehicle. Sell or lease the EV, but lease the battery pack from a supervised battery provider.
- Give a 'finders fee' to private individuals for "steering" a customer into an EV.
- Create and fund a one-stop information source for all EV information. This could be put on a web site and/or a CD-ROM, packed with multimedia presentations explaining every aspect of the EV market in a visual and graphical way.

- Produce a ZEV documentary using celebrity EV drivers that could be shown on various channels as well as a brochure with similar information that could be handed out by EV drivers.
- Expand EV rental programs.
- Create a voluntary program such as "EV day" where EV drivers could bring their vehicles and literature to shopping centers, schools, rallies, etc., for display and test drives.
- Create a permanent EV Exposition, or a series of EV Expositions to expose people to EVs. There could be several of them throughout the state in locations like San Diego, Palm Springs, Orange County, LA, Santa Barbara, Monterey, San Jose, San Francisco etc.

## **E. SUMMARY AND RECOMMENDATIONS**

It is important that we take this opportunity to move forward to develop a comprehensive outreach and public education plan for ZEVs. As we approach 2003, we need to educate consumers about the benefits and attributes of ZEVs. The Board made it a priority at the September 2000 meeting and many stakeholders have shown strong interest in working together to develop and implement a statewide outreach program.

The ARB recognizes that many stakeholders have already put a lot of time and energy into market research and outreach for ZEVs. We want to work with all the stakeholders to use what has already been done to move forward towards developing an effective outreach and public education program.

As we move forward, the goals of a comprehensive outreach and public education plan should include educating consumers on how their transportation choices impact the environment, public health and energy consumption. Such a plan should also educate the public on the many attributes of new clean air technologies such as ZEVs.

To achieve these goals, it is important that the plan include ways to increase the public's exposure to ZEV technologies, increase the public's opportunities to test drive these vehicles and ensure that up-to-date, accurate and easily accessible information on ZEVs is available. The plan should also address how different types of ZEVs fit into a zero emission transportation system.

To begin the process, it is important to get all the stakeholders together to discuss resources, expertise and information. In order to do this, staff will hold a public workshop in early 2001. This will be the catalyst for developing a working relationship with all of the stakeholders. At the workshop, ARB staff will establish a steering committee for public outreach and education. It is important that we get the entire spectrum of stakeholders involved in this steering committee including government, environmental groups, ZEV advocates and auto manufacturers.

ARB staff also recommends using the "Electric Vehicle Consumer Awareness Campaign" as the foundation for developing and implementing an outreach plan. Active commitment from all the stakeholders is necessary to make this campaign successful and in the long run will help attract financial support from additional stakeholders. As mentioned earlier, funding is an essential element for making this outreach effort successful. Full implementation of this proposal would cost \$7 million. This would pay for a large-scale outreach campaign including a public relations firm and extensive paid media.

If all of these elements, including input from experts and stakeholders are implemented, this comprehensive public education and outreach plan will play an important role in achieving a sustainable ZEV market in California.

## Attachment 1

# ZEV Outreach Plan

## Goals:

- ❖ Increase the public's understanding of zero emission vehicles and develop a base of support for the ZEV market.

## Audience:

- Car buying public
- Governor/Legislature
- Public Agencies
- Media
- Car Dealers
- City Governments (Councils, Supervisors)
- Air Districts
- Schools (teachers, students and administrations)
- Businesses with fleets
- Environmentally challenged communities

## Messages:

- ZEVs are good for air quality
- ZEVs have performance benefits
- ZEV drivers don't have to go to the gas station, get oil changes or smog checks
- ZEVs are important for technology advancement
- ZEVs are proven technology - they work!
- Consumers have an environmental choice when purchasing a car
- California is committed to ZEVs
- Consumers should examine their transportation needs when purchasing a car
- Monetary and non-monetary incentives exist for ZEVs
- ZEVs provide localized and personal environmental benefits (community health)
- ZEVs make a personal statement about one's commitment to the environment
- ZEVs are safe
- There are multi-media environmental and energy dependence benefits to ZEVs

## Activities and Events:

- ✓ Visits to Schools
- ✓ Speaking at conferences
- ✓ ZEVent 2001
- ✓ Ride and Drives for the public
- ✓ Coupons for EV Rental opportunities
- ✓ Public Loan programs
- ✓ Educational Workshops for Dealers, fleets and government organizations

## **Products:**

### *Publications:*

- ❑ Glossy Brochure
- ❑ Fact Sheets:
  - Emissions benefits
  - Energy Impacts
  - Chargers/Infrastructure and Safety of using EVs
- ❑ Calendar or Poster
- ❑ Media Kit
- ❑ Quotes and pictures of EV drivers
- ❑ Website enhancements

### *Giveaways:*

- ❑ Pens and Pencils
- ❑ Pins
- ❑ Bumper Stickers
- ❑ Bulletin Board Clips
- ❑ Memo Pads
- ❑ White board with logo

### *Others:*

- ❑ Public Service Announcements
- ❑ Video News Releases
- ❑ Enhanced display for conferences and events
- ❑ School curriculum/educational tools for kids

## **Partners:**

- ❖ Auto Manufacturers
- ❖ Auto Alliance
- ❖ ZEV Alliance
- ❖ Cal ETC
- ❖ Production EV Drivers Coalition
- ❖ Department of General Services
- ❖ EV Sacramento Participants

## Attachment 2

### ZEV Alliance Principles for Public Education On Zero-Emission Vehicles

American Lung  
Association of  
California

—

California Electric  
Transportation Coalition

—

California League of  
Conservation Voters

—

California Public  
Interest Research  
Group

—

Coalition for Clean Air

—

Natural Resources  
Defense Council

—

Planning and  
Conservation League

—

Sierra Club

—

The Steven and  
Michele Kirsch  
Foundation

—

Union of Concerned  
Scientists

—

- 1. Any public education campaign supported by the Air Resources Board should inform people of the environmental and public health benefits of zero emission vehicles.**
  - A public education campaign sanctioned by the state should seek to educate people about the environmental and health impacts of continued reliance on petroleum-based fuels and the importance of considering environmental impacts when choosing all vehicles, and identify the full fuel-cycle and multi-media benefits of ZEVs.
- 2. Any public education campaign conducted under the auspices of the ARB should include environmental and public health representation as key components of an oversight or steering committee to assist in development and implementation of the campaign.**
  - An aggressive public education campaign is warranted to effectively address misperceptions and promote the benefits of ZEVs. Such an effort, conducted as an official component of the ZEV program should formally provide for input from appropriate environmental and public health advocacy communities into the development and implementation of the campaign.
- 3. Any public education campaign conducted under the auspices of the ARB should highlight the real-world experiences of EV drivers and include driver representation on an oversight or steering committee to assist in development and implementation of the campaign.**
  - Drivers of the first commercially available ZEVs are some of the most satisfied and loyal vehicle owners in history. Their real-world experiences are invaluable in communicating credibly the benefits and challenges of driving EVs.
  - A public education campaign should clearly communicate the many advantages of driving EVs, including the benefits of home refueling, reduced fuel costs and other monetary incentives, elimination of routine maintenance such as tune-ups and oil changes, as well as smog checks, excellent performance of modern EVs, preconditioning, HOV access, etc. It is only by clearly contrasting the ownership benefits of EVs vs. traditional vehicles that consumers can effectively weigh their vehicle options.
- 4. Any public education campaign conducted under the auspices of the ARB should include a component for increasing opportunities for people to be exposed to the technology, including opportunities for test drives.**
  - Experience has proven that the best way to overcome misperceptions about EV performance is to get people behind the wheel. ARB should expand on its recent successful ZEVent, and take the program on the road throughout California.
  - Test drives of EVs and other ZEVs should be readily and easily available to all interested consumers.

5. **Any public education campaign conducted under the auspices of the ARB should employ all available marketing and information resources and technologies to ensure that messages are communicated aggressively and effectively.**
  - The campaign should include print and broadcast advertisement, including the possibility of paid media if a public service announcement campaign does not reach the desired audience. Outdoor advertising also should be employed via billboards, on buses and at key locations for prospective car buyers.
  - The campaign should include a web site to encourage and support sales of ZEVs, including listings of dealerships and opportunities for test drives searchable by zip code, a listing of public charging sites, information about all available ZEVs and general information about the benefits of ZEVs.
  - ARB should assign dedicated staff to work with media to monitor coverage, provide objective information, and address misperceptions.
6. **ARB should work with automobile manufacturers to ensure that accurate and effective promotional materials about ZEVs are available to interested customers.**
  - Automobile manufacturers are naturally compromised in their ability to effectively promote the advantages of EVs compared with their core product, gasoline-powered vehicles. ARB should make available, via car dealerships, materials that promote the benefits of EVs and identify ZEV products currently available.
7. **Any public education campaign conducted under the auspices of the ARB should seek to engage in partnerships to further expand the effort.**
  - ARB should incorporate programs to reach students and their parents through school-based programs.
  - ARB should consider partnerships with foundations and other private entities that may be able to assist in funding or otherwise support a public education campaign.
  - ARB should explore opportunities for partnering with retail companies, including online retailers and internet services to expand opportunities to reach the widest possible audience and/or target potential customers for ZEV technology.
8. **Any public education campaign conducted under the auspices of the ARB should aggressively promote ZEV incentives**
  - A host of incentives already available and proposed offer benefits for ZEV drivers that could influence their vehicle purchase decisions. ARB should actively promote awareness of such incentives.